

Science in a Bag – Teacher Page
Living & Nonliving Items

Grade Level: 3rd Grade

Standards :

~GLE 0307.2.1 Categorize things as living or non-living.

~0307.2.1 Use a T-Chart to compare and contrast the characteristics of living and non-living things.

~SPI 0307.2.1 Distinguish between living and non-living things.

Task Objective : TLW be able to distinguish between living and nonliving organisms by sorting items into the correct group.

Explanation

It is important for students to recognize the difference between nonliving and living items. Everyday we come in contact with things that are living and things that are nonliving. Most things are easy to recognize, like animals, humans etc, but there are some things that you don't always assume are living.

The students will be given a box to sort items in. The box will be labeled non living on one side and living on the other. The students will have to identify which item goes in what category. By doing this activity, students will get to do a hands on activity while they learn the difference between nonliving and living items.

Academic Vocabulary

~Environment-the surroundings or conditions in which a person, animal, or plant lives or operates

~Energy-the strength and vitality required for sustained physical or mental activity

~Nutrients-a substance that provides nourishment essential for growth and the maintenance of life

~Survive-a substance that provides nourishment essential for growth and the maintenance of life

~Plants-a living organism of the kind exemplified by trees, shrubs, herbs, grasses, ferns, and mosses, typically growing in a permanent site, absorbing water and inorganic substances through its roots, and synthesizing nutrients in its leaves by photosynthesis using the green pigment chlorophyll



~Animals-a living organism that feeds on organic matter, typically having specialized sense organs and nervous system and able to respond rapidly to stimuli
~Soil-the upper layer of earth in which plants grow, a black or dark brown material typically consisting of a mixture of organic remains, clay, and rock particles
~Nonliving-never had traits of life
~Living-alive

The Frayer Model was designed by Dorothy Frayer and her colleagues at the University of Wisconsin to provide for a thorough understanding of new words. Students are asked to provide a Definition of the word, Facts or Characteristics of the word, Examples, and Nonexamples. This graphic organizer will lead students to a deeper understanding of a word and its relationship to their own lives. **Very good!**

Common Misconceptions

Students of all ages will have certain misconceptions when identifying something that is living and something that is not. Confusion can occur as many things may not appear to be living. Plants are one such example. Younger students may not understand that plants breathe, reproduce, move and change, as these processes are not immediately visible. Older students may classify something as living by using a simple checklist with questions such as: does it breathe, move, excrete, feel, grow, consume and reproduce? Although this kind of checklist is useful, it's important to recognise that not all living things will do *all* of these activities. Worker bees do not reproduce, for example, while other living things, such as seeds and bulbs, remain dormant for long periods. There are various ways that you can support your students in identifying living and nonliving things. You can demonstrate to younger students that a plant is alive and moves, grows and reproduces. Giving younger students the opportunity to plant seeds and make observations over time will help them understand that small changes do take place over given periods. This will establish that seeds and bulbs are alive, but that it is necessary to give them the conditions they need for growth. **Excellent description!**

Real World Connection

Humans rely on a wide variety of living and nonliving things. But we have to take care of living things differently than non-living things. Plants need water, light, and air to grow. We need plants to use for food, clothing, and much more. Animals require food, water, air, and shelter. We use animals for food, clothing, labor, companionship, and much more. As humans, we have the ability and responsibility to care for ourselves and other living things so that our own needs are met and to ensure that the world will always be full of diverse living things. **Well stated.**

Connections Across the Curriculum

Great job with describing relevant connections for writing and an additional science connection.

1. CCSS.ELA-LITERACY.W.3.2.A (Introduce a topic and group related information together; include illustrations when useful to **aiding** comprehension) With this standard students could be given a topic such as, "Nonliving Items" or

- “Living Items”. They could write about the topic and include illustrations of their own.
2. CCSS.ELA-LITERACY.W.3.1 (Write opinion pieces on topics or texts, supporting a point of view with reasons.) Students can create their own text by picking if they think nonliving or living items are better. This is demonstrating how they can express their own opinions.
 3. 0307.2.2 (Label a drawing of an environment to illustrate interrelationships among plants and animals.) Once students understand the difference they can move onto labeling the living things (animals/plants) into groups and how they are related.

References

(Common Misconceptions)

<http://www.open.edu/openlearnworks/mod/oucontent/view.php?id=52680§ion=1>

(Real World Connections)

https://www.sciencea-z.com/.../unit/.../living_non-livingk-2_unit_guide.pdf

(Frayer Model)

<https://wvde.state.wv.us/strategybank/FrayerModel.html>

(Vocabulary)

www.google.com

Science in a Bag – Student Page
Living & Nonliving Items

Grade Level: 3rd Grade

Standards :

~GLE 0307.2.1
Categorize things as
living or non-living.

~0307.2.1 Use a
T-Chart to compare
and contrast the
characteristics of
living and non- living
things.



~SPI 0307.2.1 Distinguish between living and non-living things.

Task Objective : TLW be able to distinguish between living and nonliving organisms by sorting items into the correct group.

Materials Needed

Box

Non living / Living real life items (cup of water, lipstick, plastic spoon, toy horse, toy pig, santa clause, tree, flip flop, pen)

Non living / Living pictures (sun, mushrooms)

Sheet of Paper

Pencil

Procedures

1. Get the science box from the shelf.
2. Read ALL the directions on top of the lid.
3. Sort the items into the correct group - Living / Nonliving
4. Check the correct answers by asking the teacher for the answer sheet.
5. If you get some wrong, place them in the correct section and note which items you got incorrect.
6. Get your interactive notebook and make a T-chart. On one side of the column put Living and the other Nonliving.
7. Sort the items into the same group as you did in the science box.
8. Once you have completed this, get the vocabulary activity and complete it.
9. Read ALL the directions for the vocabulary activity.
10. Place your vocabulary activity in the box to be graded.

11. Clean up your mess from all activities!

Academic Vocabulary

- ~Environment-the surroundings or conditions in which a person, animal, or plant lives or operates
- ~Energy-the strength and vitality required for sustained physical or mental activity
- ~Nutrients-a substance that provides nourishment essential for growth and the maintenance of life
- ~Survive-a substance that provides nourishment essential for growth and the maintenance of life
- ~Plants-a living organism of the kind exemplified by trees, shrubs, herbs, grasses, ferns, and mosses, typically growing in a permanent site, absorbing water and inorganic substances through its roots, and synthesizing nutrients in its leaves by photosynthesis using the green pigment chlorophyll
- ~Animals-a living organism that feeds on organic matter, typically having specialized sense organs and nervous system and able to respond rapidly to stimuli
- ~Soil-the upper layer of earth in which plants grow, a black or dark brown material typically consisting of a mixture of organic remains, clay, and rock particles
- ~Nonliving-no longer alive
- ~Living-alive

You will be using one of the FACTS #20 pg.99, Frayer Model, to complete your vocabulary activity. There is a folder connected to the bottom of the box and you need to put all of your vocabulary words into their own individual template. You can do this with 9 different students or you can do all 9 yourself. You will have to write the definition, facts/characteristics, examples, and nonexamples of each definition. You need to complete this activity after you get done with the science box activity. This will give you more of an idea of what each definition means.

Assessment

You will be using FACTS #13 pg.83, Fact First Questioning, to assess yourself on this topic. You will need to pair up with 1 partner. Fact First Questioning is a higher order questioning technique used to draw out student knowledge beyond recall level. It takes a factual “what” question and turns it into a deeper “how” or “why” question because you are stating the fact first and asking your partner to elaborate. You will be asked questions in regards to Living and Nonliving things. Use your own sheet of a paper and number the paper 1-5. You will be asked 5 questions and you will write the answers to ALL parts of the question. Questions are listed below.

1. What is a living item? How do you know this is a living item?
2. What is a non living item? Why are these nonliving?
3. How is a plant considered to be a living thing?
4. Does a pencil need air, water, and food? How do you know?
5. Why do living items need water? How do you know?

Clean-up

Whenever you are finished with the box, put all materials back into the box and place back on the shelf. At this point, you should have all answers recorded in your interactive notebook. Make sure you mix up your answers so that the next person will have to figure out the correct answers on their own. Do not leave the box a mess! Clean up the entire activity correctly and neatly